DOD Executive Agency for LLRW

Volume 10, Issue 1

January 2000

the RAD WASTE NEWS

Inside this issue:

Special points of interest:

- Two interesting articles on how we do business—Fix-Priced Contracting and How We Use the QBL
- The Tenth Annual DOD LLRW Generators Meeting is scheduled for 7-8 March 2000—Registration Form at page 5

DODRAD 2000

The DOD Executive Agency for Low-Level Radioactive Waste will host DODRAD 2000, the Tenth Annual Waste Generators Meeting in Williamsburg, VA, March 7 and 8, 2000. There is a limited amount of display/exhibit space remaining. We are again soliciting technical presentations from the industry. Technical presentations must be applicable to DOD generated waste streams and processing requirements, and will be selected on applicability and a first come basis - these agenda time slots are extremely limited and require an abstract ASAP. Direct inquiries and questions to conference chairman, Mr. Rich Conley, (309) 782-0171, fax (309) 782-2988, email: conleyr@ioc.army.mil.

REGISTRATION FORM INSIDE….SEND IT TODAY!

What to Do With Unwanted Radioactive Material - PART II

By kelly crooks

Well, here's part two in the series for guidelines to follow in collecting and consolidating excess radioactive material in preparation for removal off-post. I know its not exciting reading so I shortened it where possible.

WHO. The installation RSO will collect excessed materials at the temporary storage site to hold for shipment.

OTHER SITES. If material is generated and temporarily stored at satellite sites, the installation RSO should furnish collection containers (metal drums preferred) to the local generator then move the filled containers to the base storage .

STORAGE. As feasible, store materials on shelves or pallets rather than containers. This allows the shipping broker to volume reduce the materials and pack the shipping containers efficiently while eliminating the need to unpack the storage container.

(Continued on page 4)

From the Desk of the Chief

The year 2000 is going to be exciting for DOD Low-Level Radioactive Waste Disposal. We have lots of challenges and opportunities ahead of us. They include:

- **Exportation fees for the Southwest and Rocky Mountain Compacts. We are working with our lawyers to determine if these fees are taxes. Right now, we do not know if we have authorization to pay these fees.**

- **South Carolina joining with Connecticut and New Jersey to form the Atlantic Compact. If this comes about, South Carolina may only accept waste from within the compact instead of continuing to open the disposal site to every state in the nation, except North Carolina. This would limit our future disposal options.**

- **Proposed rulemaking. Several proposed rules are under consideration. For example, the U. S. Environmental Protection Agency published a proposed rule on the storage, treatment, transportation, and disposal of mixed waste. We continue to review proposed rules such as this for impact on the DOD LLRW disposal program.**

- **The 10th Annual Waste Generators Meeting. Our staff is busy planning for this dynamic meeting. The keynote speaker is Kenneth L. Miller, M.S. C.H.P., Professor of Radiology, Director: Division of Health Physics, Penn State University. Find out more information on this meeting in this issue of the Rad Waste News.**

- **Ambitious disposal project schedule. We have disposal projects scheduled for Alaska, Europe, and Asia besides many CONUS projects.**

- **Implement AR 700-48, Management of equipment Contaminated with Depleted Uranium or Radioactive Commodities and DA Pam 700-48, Handling Procedures for Equipment Contaminated with Depleted Uranium or Radioactive Commodities. This long overdue guidance officially establishes the Army Contaminated Equipment Retrograde Team (ACERT) within the Industrial Operations Command. Use <ftp://pubs.army.mil/pub/epubs/pdf/r700_48.pdf> to get a copy of the Army Regulation and <ftp://pubs.army.mil/pub/epubs/pdf/p700_48.pdf> to get a copy of the Army Pamphlet. We now have a challenge to get the ACERT fully trained and mission capable.**

- **Implementation of Joint Computer Aided Acquisition Support (JCALS) System. JCALS is a software program that automates workflow. We are doing a pilot JCALS project to automate the Army's Low Level Radioactive Waste disposal workflow within our headquarters. Our objectives are to monitor the disposal workflow continually and to have an electronic project file that any team member can access. This project ought to result in increased customer satisfaction because all team members will have project file access and can answer questions as they arise. It also should result in improvements as we refine the disposal process. So far, we've trained about half our staff on this software. We will keep our Army generators informed of our progress on the pilot as it progresses.**

- **Army excess radioactive commodity consolidation facility. We are exploring the establishment of this facility on an Army installation. We believe that the Army will accrue considerable cost avoidance and that Army generators can turn in more excessed commodities with radioactive sources each year.**

These opportunities and challenges continue to make our business dynamic. We continue to ask our customers – the generators of LLRW – how we can improve our service to you. Please don't hesitate to suggest changes we can make for the better.

Rosalene Graham

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FIRM-FIXED PRICE CONTRACTING By mike Styvaert

During the past 2-3 years, our HQ, IOC Environmental Contracting office has almost exclusively awarded firm-fixed price (FFP) contracts for our radioactive waste brokerage and remediation projects. There are several reasons why IOC has gone almost exclusively to FFP contracting for these types of projects.

From an accounting standpoint, FFP contracts are much easier to finalize. With time and materials and cost plus fixed-fee agreements, the contracts can take years to close out. With these other than FFP contracts, the Government must wait for the contractor to finalize and DCAA to verify the total cost of the project before the project can be closed out. The Rad Waste Office must often search for prior year funds to cover any cost growths due to adjusted overhead rates after the work is complete. When the contractor completes work on a Firm Fixed Price contract, the company submits final billing for the contract award amount and then IOC can financially close out the project after making final payment.

From a project management and financial standpoint, FFP contracting is supposed to make our jobs at the IOC more efficient. We manage a minimum of 100 new radioactive waste projects each fiscal year. Most of these involve an IOC contract with a commercial supplier. It takes a tremendous amount of manpower to be onsite and intensely manage the costs for each effort, which is necessary with other than FFP contracting methods. When we write a FFP contract, we intensively manage the preparation of the Scope of Work (SOW), assuring our customer/installation provides us with complete and accurate information so we can write a complete and accurate SOW. We carefully evaluate and critique the contractor's cost and technical proposal before the contracting officer awards the contract. Once the IOC contracting office awards a FFP contract we expect the contractor to execute the project as proposed, with less on-site management, and send us an invoice.

With FFP contracting, the supplier realizes a greater risk. The burden is on the contractor to prepare a complete and accurate proposal and then complete the project on time and within budget. The invoicing process is much simpler for FFP contracts. All we want is a simple one-line invoice. Bulky back-up documentation (except for shipping manifest and certificates of disposal) and receipts are not necessary under firm fixed price contracts.

Overall, FFP contracts can be a better way of doing business. Nevertheless, there is definitely room for improvement. Our contractors need to realize that if they underestimate the labor, materials or equipment requirements, it's NOT a cost growth. Our installations and customers need to understand that the Government is responsible for cost increases that are the result of Scope of Work, project description, waste inventory or agreed upon Government support discrepancies.

RECYCLE of SMOKE DETECTORS AND EXIT SIGNS

by Judy Woodson

Do you have smoke detectors or exit signs that you want to get rid of or no longer have a need for? We can become the vehicle that provides you with a service for recycling these items at the Wright-Patterson Air Force Base Radioactive Material Recycling Facility (WPAFB). We consider recycling as an advantage for eliminating disposal cost and making good environmental sense. Whenever practical and possible we will use this method.

All you have to do is send us an inventory of your items for recycle. Include the description, type, model, radionuclide, activity and quantity. We will request shipping authorization from WPAFB. They will send you an authorization letter with a control number for the shipment and a list of the items they recycle. We'll have to dispose of the radioactive material listed in your request and not accepted by WPAFB. They will also provide you with shipping instructions and a shipment checklist. You'll have 45 days from the date of the authorization letter to ship the items to WPAFB. You better have a good inventory since you can't add items without prior authorization from their office.

Once WPAFB receives the items they will provide you a receipt letter certifying they received the radioactive material and they will note any shipping or inventory discrepancies. Maintain this letter in your files for future inquires.

We're researching other recycling mechanisms and will use those options when they prove themselves safe and cost effective. For more information contact Judy Woodson at DSN 793-1886, or commercial 309 782-1886, electronic mail address WoodsonJ@ioc.army.mil.

Editor's Note: In October 1999, the DA Radiation Safety Officer reminded Commanders that failure to maintain records showing the dates of installing, servicing, and removing from installation tritium exit signs may subject commanders to NRC enforcement actions with the possibility of fines and adverse publicity. Please contact our office (309) 782-0338, for the full text of this message and any additional questions regarding the management/disposal of exit signs.

HOW DO WE USE THE QUALIFIED BIDDERS LIST?

By Connie Moore

I know that many of you have wondered how we use the Qualified Bidders List (QBL). To award a contract using the QBL we have several steps to go through.

Initially our customer will send a request for assistance into our office. This request will require work in one or more of the following categories: Characterization and Verification, Decontamination and Decommissioning, Transportation and Brokering, Processing and Disposal. We determine if we should use the QBL or an 8A contractor. The timeframe and magnitude of the project are really factors here. If our customer is in a hurry we will use a qualified 8A contractor. If we have time and the project is large and fairly well defined we will use the QBL.

If we determine that we'll use the QBL, an IOC Health Physicist will develop a Scope of Work (SOW) and an Independent Government Estimate (IGE). We'll send this SOW and IGE to Mr. Matthys, our Contracting Officer who will publish a notice in the Commerce Business Daily (CBD). The notice is usually runs for 15-30 days. Mr. Matthys sends the bidder package to the contractors on the IOC QBL who qualify in the categories included in the SOW.

Our office will arrange for a site visit for the IOC QBL contractors usually two to three weeks after Mr. Matthys sends the Request for Proposal (RFP) out. We allow only two people from each QBL contractor to attend the site visit. All QBL contractors may ask questions. The IOC sends a consolidated list of questions and answers to all QBL contractors, even those that do not attend the site visit.

After the solicitation closing date, a group of four to five technical and planning personnel review all proposals. The review team typically consists of individuals from the IOC and the service involved with the job. The team establishes a criteria for, reviewing and approving the contractors technical approach. After approving the technical approach, the team takes cost into consideration.

The IOC Contracting Office notifies all contractors of the selection. Mr. Matthys, our Contracting Officer, then awards the contract.

*(**Unwanted Material**...Continued from page 1)*

LICENSED MATERIAL. Keep quantities of each radionuclide within the applicable Nuclear Regulatory Commission license limits; e.g., no more than 10,000 Ci of tritium.

SURVEYS. Perform radiological surveys of areas at least quarterly or as required by the appropriate NRC license or Army guidance document.

SOLIDS:

a. Line collection containers with plastic.

b. Segregate like items, e.g. same National Stock Number (NSN), in plastic bags (4 mil, clear preferred) and mark the bag with the NSN, radionuclide (H3, Ra226, Am241, etc.), item name, quantity, and activity per item. Double bag broken items in plastic and segregate from intact items.

c. If storing items in containers, make inspection of the contents easy for the shipping broker, i.e. easily removed and visible.

d. Do not compact materials unless approved by the Safety/Rad Waste Disposal Team at the Industrial Operations Command, DSN 793-2989, comm (309) 782-2989.

LIQUIDS:

a. Segregate liquids from solids.

b. At the generation site, collect radioactive liquids in plastic, earthenware, or thick-walled glass bottle inner containers. The container must not break if the liquid freezes. Place the inner containers in overpack containers and fill the overpack with an absorbent to contain leaks.

c. Do not solidify liquids. The shipping broker will determine the requirements for shipment based on the material.

d. Identify scintillation fluids containing hazardous material (toluene or xylene) and dispose within 90 days of generation.

MARKING COLLECTION CONTAINERS. Maintain the inventory of contents and the maximum radiation level for each container.

MONITORING CONTAINERS. Check collection containers periodically to assure that:

a. Containers are in good condition and do not leak; i.e., no holes, no rust.

b. Outside container surfaces are free of removable contamination.

c. Containers are properly marked.

If you have any question regarding excess material, please contact Mr. Kelly Crooks, (309) 782-0338, DSN 793-0338, e-mail crooksk@ioc.army.mil.

DODRAD 2000

REGISTRATION FORM

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Richard Conley at:
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Title _____

Affiliation/Organization _____

Address _____

City _____

State _____ **Zip** _____

Phone _____ **Fax** _____

E-mail address _____

☐ **I am interesting in exhibiting**

Reporting radioactivity in becquerels instead of

This article will explore the units of radioactivity that we commonly use. On shipping papers we used to report the amount of radioactivity in units of millicuries, now we commonly use Megabecquerels and may include millicuries. Why the change?

Until April 1, 1997, transportation regulations allowed, for domestic transportation of radioactive material, to express the radioactivity solely in terms of the curie (or submultiple of the curie). Now we are required on shipping papers to include

> *"The activity of the shipment in terms of the appropriate SI units (e.g. Becquerel, Terabecquerel, etc.) or in terms of the appropriate SI units followed by the customary units (e.g. Curies, millicuries, etc.)."*

This is a quote from Title 49 Code of Federal Regulations (CFR) 172.203(d)4.

That is what the Department of Transportation (DOT) Regulations require. Remember, specific disposal sites, processors, or others receiving your radioactive material may have site conditions, license criteria or other regulations, requiring you to report the radioactivity in a specific manner. These requirements should be consistent with the DOT regulations. If you see an inconsistency, call us and we will help you resolve it.

To complete the discussion we will look at the basic definitions of the curie and the becquerel.

Title 10 CFR 20.1005 defines:

One curie = 3.7 x 10^{10} disintegrations per second—and—

One becquerel = 1 disintegration per second.

We abbreviate the curie as Ci and the becquerel as Bq. The table at Figure 1 below lists commonly used submultiples and multiples.

Submultiples			Multiples		
10^{-3}	milli	m	10^{3}	kilo	k
10^{-6}	micro	u or μ	10^{6}	mega	M
10^{-9}	nano	n	10^{9}	giga	G
10^{-12}	pico	p or ρ	10^{12}	tera	T

Figure 1

By prefixing the curie with m, we get the millicurie or 10^{-3} of a curie. We can also write this as 0.001 curies or one thousandth of a curie.

With the definitions defined above you can see that 1 curie is 3.7 x 10^{10} Bq. A conversion that we commonly use is the conversion from millicuries to Megabecquerels. To do this conversion we just multiply the number of millicuries by 37. I show the derivation of this conversion in Figure 2 below.

Sometimes we express numbers in scientific notation using an 'E' instead of using a 'X 10' notation with a superscript. Using the 'E' notation one curie is 3.7E10 Bq.

If you have any questions on this subject, you can contact David Horton at (309) 782-1759, DSN 793-1759, or HortonD@ioc.army.mil.

$$Y\ mCi \times \left(10^{-3}\,\mathrm{Ci}/\mathrm{mCi}\right) \times \left(3.7 \times 10^{10}\,Bq/Ci\right) \times \left(MBq/10^{6}\,Bq\right) = 37 \times (Y)\ MBq$$

where Y *is the number of millicuries*

Figure 2

BARNWELL UPDATE - Rumors Addressed for now

Recent rumors about Barnwell and CNS has netted some responses from company. These are excerpts from information reprinted from the ACURI website with permission. Check out their informative site at http://www.acuri.com/.—Ed.

Regarding rumors that Barnwell will close in the next few months, George Antonucci told ACURI, " We are not closing in 3 months. Our disposal contracts run through 6/30/00."

A question regarding the sale of Waste Management Nuclear Systems, netted the following comment from Mr. Antonucci, " The sale of WMNS is on track and we hope to be able to issue an update very soon."

Excerpts from Copy of CNS LLC letter to all customers dated, January 7, 2000.

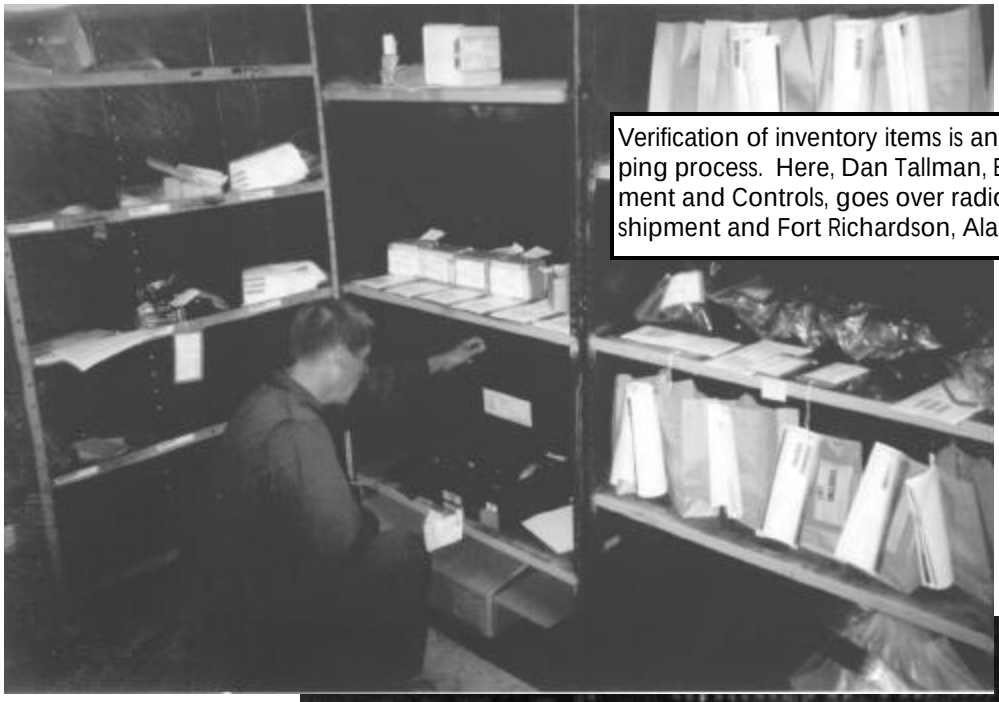
"Chem-Nuclear wants to assure you that Barnwell will be available to meet your disposal needs through June 30, 2000. As a result of the recommendation of the South Carolina Governor's Task Force to join the Northeast Compact, and thereby form the Atlantic Compact, there is a degree of uncertainty concerning the future availability of Barnwell for all of our customers. We have been and are continuing to work with all the stakeholders to ensure that the Barnwell disposal option is available to all of our customers July 2000 and beyond.

Even if legislation is passed that forms the Atlantic Compact, we believe that an agreement will be included which will allow for a gradual restriction of access to Barnwell for all non-Atlantic Compact members."

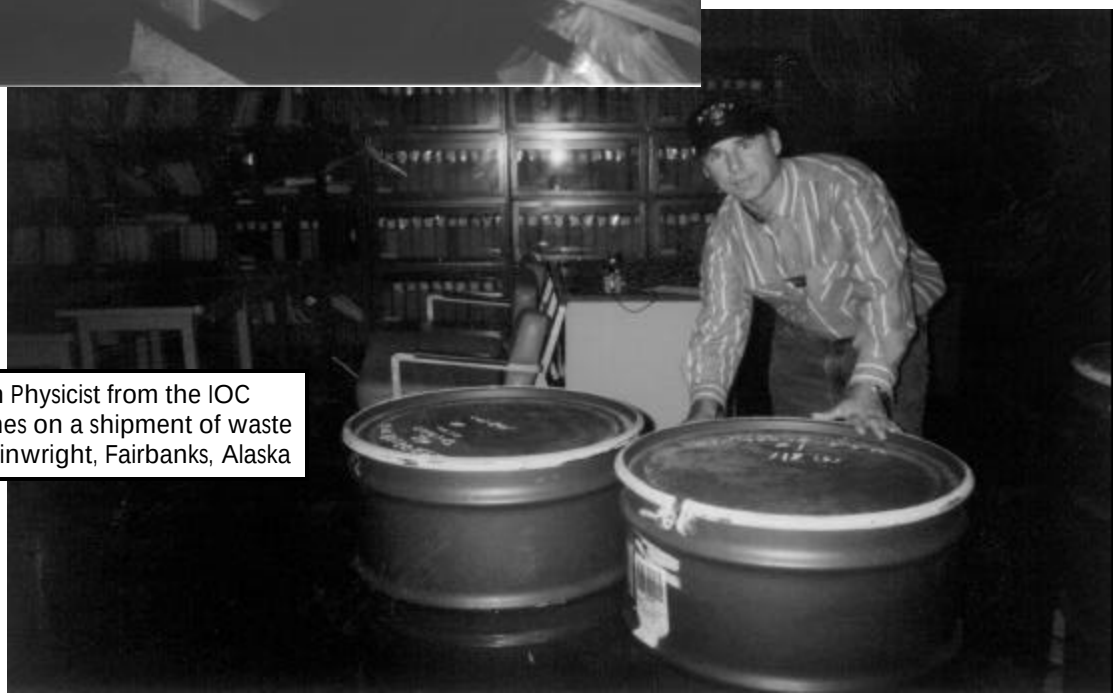
IOC HEADS NORTH FOR WASTE PICK-UP

BY BILL METCALF

During September 1999, the Industrial Operations Command made a waste brokerage run to the great northern state of Alaska. The Team of Mr. Bill Metcalf, IOC, and Mr. Dan Tallman, from Environmental Management and Controls, (one of our consolidation contractors) visited various Army installations in Alaska to prepare material for shipment. The IOC makes periodic trips to Alaska to pick-up and consolidate waste from Army Units in Alaska. The POC for information or questions is Mr. Bill Metcalf. (309) 782-2248, DSN 793-2248 or metcalfw@ioc.army.mil.



Verification of inventory items is an important part of the shipping process. Here, Dan Tallman, Environmental Management and Controls, goes over radioactive items offered for shipment and Fort Richardson, Alaska.



Mr. Bill Metcalf, Health Physicist from the IOC applies the final touches on a shipment of waste containers at Fort Wainwright, Fairbanks, Alaska

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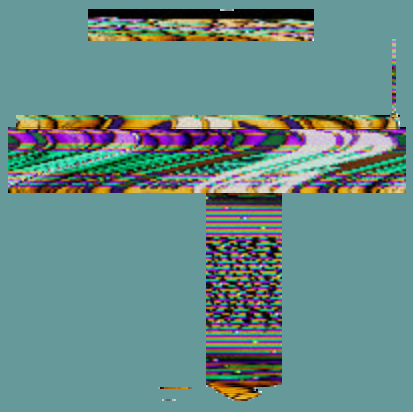

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or the WORLD WIDE WEB at http://www.ioc.army.mil/dm/DMWWEB/indexdmw.htm

***the* RAD WASTE NEWS**

Richard D. Conley, Editor